231

Area variations in the process of care in urban general practice

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One hundred and eighty three practitioners collected data on 110 000 consultations. Case mix and pattern of care are compared for doctors practising in different urban areas. Inner city areas are compared with outer areas and the most deprived with the most affluent. Case mix varies slightly between areas, but there are no systematic differences in the pattern of care, which is equally variable in different areas. The stereotype of inner city general practice is not confirmed.

Introduction

The increasing emphasis on care in the community places heavy responsibilities on the primary health care team and on general practioners in particular. Yet there are doubts about the ability or willingness of general practitioners to meet these responsibilities in all areas. In particular, general practice in the inner cities has been impugated as unable to meet the needs of the populations of these areas, who suffer economic and social will be also the population of these areas, who suffer economic and social work in London has shown an association between certain features of practice structure—such as manpower, training, equipment, premises, and staff—and patterns of morbidity and

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mortality.** Such work suggests that having an area strategy for improving general practice would identify areas of both great need and poor standards of care. Two important questions remain unanswerd, however, Firstly, what is the relation between the structural characteristics of practice and the actual care provided 25 Secondly, is the situation described in London representative of the other major cities in the United Kingdom? Wood described a large survey of general practitioners concreasits of which showed that in contrast to London there were few differences between the inner city and outer areas of Manchester in the structural characteristics of general practice.** She warned, however, that "similarities in the way services are organised may conceal important differences in access to service and the treatment provided." Indeed, it is sometimes suggested that although doctors can to a large extent determine the structural characteristics of their practices, the pattern of care types of caser, and the behaviour of the people for whom they provide care, which reflect the socioeconomic characteristics of their practices, the control of their patient populations.

The research unit then undertook a study of the process of care to show whether there were systematic differences in the pattern of care provided in different parts of the city of Manchester. A study of the "process" of care in urban general proposed control of the process of care in urban general proposed cases, and the process of care in urban general proposed cases, and the process of care in urban general proposed cases, and the process of care in urban general proposed cases, and the process of care in urban general proposed cases, and the process of care in urban general proposed cases, and the process of care in urban general proposed cases, and the process of care in urban general proposed cases, and the process of care in urban general proposed cases, and the process of care in urban general proposed cases, and the process of care in urban

The population for the first study reported by Wood was made up of general practitioner principals practising in Manchester, Salford, and Trafford. Of the 485 general practitioners, 366 (75",..) agreed to be interviewed. These general practitioners were then asked if

BRITISH MEDICAL JOURNAL VOLUME 289 28 JULY 1984

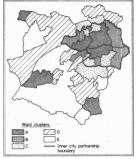
each of three four-month periods, yielding a sotal of 80 287 consultation.

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each of three four-month periods, yielding a total of 80 267 consulta

TABLE 111-Summary characteristics of ward clusters

- A High concentration of governy. High unemployment (25°.). Low social class B Glief housing often in bud condition. Misture of owner occupies, privately remed, and control remed for housing often in bud condition. Misture of owner occupies, privately and the control of the condition of the condition of the control of the condition of the condit



Age group	Percentage of patients in inner area (n = 32 484)	Percentage of patients in outer area (n = 42 506)	Total " (n = 74 990)
0-4	9.3	8.7	9.0
5-14	7.8	8.1	8.0
15-34	29.0	28 5	28 8
35-54	22.6	21.8	221
55-64	13.1	130	13-0
65-74	11.0	11.3	11 2
75 and over	71	8.6	80

INNER CITY AND OUTER AREAS

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Cases categorised by International Classification of Diseases	Inner area	Outer area	Total
(1) Infectious/parasitic	6.8	7.9	7.3
(2) Neoplasms	1.3	1-4	1.3
(3) Endocrine/nutritional/metabolic	2.7	2.0	2.4
(5) Mental	8-1	7:3	7.7
(6) Central nervous system	6.6	7.1	6.9
(7) Circulatory system	10.4	10.4	10-4
(8) Respiratory system	19-4	17.4	18 4
(9) Digestive system	5.3	4.7	5.0
10) Genitourinary	4.2	4.6	44
12) Skin	53	5.4	5 4
13) Musculoskeletel	8.4	8.6	8.5
16) Symptoms	1.2	2.5	2.8
17) Accidents	12	5.6	5.4
(18) Supplementary	120	13.7	12 9

y' = 237 52, p = - 0 01 Cramer's V = 0 56

ally significant, the value of Cramer's V, which measures the strength of association (range 0-1), is very low, reflecting the small scale of differences between areas. A similar pattern is evident with respect to general practitioner actions. Table VI shows the percentage of consultations in which selected event occurred. Some of the differences between inner and ourse the consultations in which selected event occurred. Some of the differences between the consultations are sufficiently only the consultation and an effective soft soft consultation confident and referrals to district nurses were. Differences were in the percentage of consultations occurring in the patient's own home and the proportion receiving a prescription, although the values of Cramer's V were still below 0.03.

TABLE VI—Actions taken by general practitioners in inner city and outer area (Percentages of age weighted tamples)

Action	erce	ares	Total	×,	P	Cramer's
Home visit	96	12.3	99	143-07	- 0.01	0.042
Prescription	739	70 3	72 1	128 99	< 0.01	0.042
Laboratory test	40	4.0	40	0.0165	0.90	0.0005
X ray examination	1.8	1-7	1.7	0.967	0.40	0 003
Consultant referral	19	6.3	6-1	3 505	0.06	0 007
Social services referral	03	0.2	0.2	32 805	0.11	0 006
Nursing referral	0.8	6.6	0.7	10-317	0.01	0 001
Return appointment						
fixed	38 7	38 6	38 7	0.361	0.55	0 002

NEIGHBOURHOOD TYPES

Table VII shows the age distribution of patients consulting general practitioners in the five area types identified. The highest proportions of very young children were found in the most deprived

Characteristics of doctors and practices	Percentage of all general practitioners in study area (n = 485)	Percentage of participating general practitioners (n = 183)
Sex Male Fernale	80 20	85 15
Age (years) < 30 30-39 40-49 50-59 60 and over	3 24 29 29 15	28 33 26
Country of origin United Kingdom and Eire Other	72 28	72 28
Size of partnership. One Two Three or four Five or more	21 20 47 12	21 17 45 16
Number of patients on list - 1000 1000-1409 1500-1409 2000-2409 2500-2909 3000 or niore	3 9 31 30 22 6	1 25 36 25 12

On "secording days" each percent prescriberer was asked to complete one line of the recounter form (fig. 1) or very face to face contest with a patient, whether in the surgery or at home. A new line was completed for each problem having an attributable course of scino. The choice of which elements to record was largely determined by All Coding, including social class, precenting problem, and diagnosis, was undertaken by the research team. Though this method of collecting data proved to be widely acceptable and paracticable, it had

BRITISH MEDICAL JOURNAL VOLUME 289 28 JULY 1984

two important limitations. Firstly, it permitted recording of only a few relatively clear cut "events," thus excluding reference to such things as the thoroughness of examination or the quality of the interaction between decror and patient. Secondly, because few of the participating doors had accurate age-set registers asta derived from the control of groups of a given age, and to the repatient of population in terms of groups of a given age, ace, or social class.

TABLE II—Reliability of data recorded by general prac-titioners compared with that recorded by independent interviewers

	". Agreement	Kappa coefficient
Sex	99	0.974
Age	99 96	0.967
Social class	81	0.831
New old patient	81	0.665
Presenting problems	60 97 98 97	0.607
Prescription	97	0.921
Certificate	98	0.880
Laboratory test	97	0.736
X ray examination	99	0.702
Referral	97	0.830
Return appointment fixed	1 87	0 733

In addition to this exercise, regular routine checks of coding pro-cedures were conducted.

Between June 1981 and December 1982 the 183 general practi-tioners collected information on approximately 110 000 consultations.

Factors such as illness, holidays, and practice problems, however, caused some "shippage," in the recording schedule, which produced an overlap of recording days and a resulting overrepresentation during the autumn. The potential bases introduced by these factors were removed by creating a "structured data base." This consisted of the days of three working weeks for each general practitioner, one week in

Group Dr No	_] [PATIE	CONFIDENTIAL	-			S	ate: irge irge	/y !										
Patient Number	Age (years)	Sex (M or F)	Site: Home/Surgery/Other	New/Old Episode	Occupation of Head of Household	Presenting Symptoms/ Problems or Reason for Attendance	Provisional Diagnosis (If none at this time, write 'none')	Prescription Issued	Certificate Issued	Microbiology	Haematology	Biochemistry		Straight	Contrast	Consultant	AHA Nursing	Social Service	Other	Return SOS	Fixed Return 5	
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areas and the highest proportions of elderly people in the more affluent areas. Although differences were not large, subsequent analyses were based on age weighted samples, as for the comparisons of inner city and outer area.

Age	(n = 19	107;	(n + 10 75	C (n = 12 310	D (n = 17 882	E (n = 14 934)	Total (n = 74 990
0-4	•	4	9.2	9.3	8.4	8.6	9.0
5-14	7	ė.	79	7.4	8.2	8.4	8.0
15-34	30		28 2	30 3	27.3	27 3	28 8
35-54	22		22 3	22 2	21 1	22.7	22 1
55-64	13	2	13 3	120	13.3	13.1	130
65-74	9	7	12 2	11.3	12.3	110	11.2
75 and							
over	6	7	7.0	7.4	9.5	8.9	80

Table VIII shows small overall differences in the types of cases among areas and no consistent pattern between the most and the least among areas and no consistent pattern to the difference and no systematic pattern in actions that general practitioners took (table IX). Perceibing was somewhal tess common in the most affluent areas but laboratory tests, a ray examinations, and all types of referral were most common in clusters.

TABLE VIII-Types of cases by ward clusters (Percentages of age weighted

Cases categorised by International Classificat	Ward clusters								
tion of Disease	A	В	C	D	Ε	Total			
(1) Infectious/parasitic	7.5	64	8:2	8 1	7.9	7.6			
(2) Neoplasms	1.3	1.3	12	14	12	1.3			
(3) Endocrine/nutritional									
metabolic	2.8	2.3	2 1	19	2 1	2 2			
(5) Mental	8.7	6.8	7.5	7.0	7.6	7.5			
(6) Central nervous									
system	64	6.4	6-8	7.1	7.7	6.9			
(7) Circulatory system	9.2	104	9.4	95	9.7	9.6			
(8) Respiratory system	18 2	21.0	18.7	18.6	16.7	18.6			
(9) Digestive system	5.3	5.0	5.0	4.6	4.7	4.0			
(10) Genitourinary	4.4	40	44	47	5.2	4.5			
(12) Skin	5.5	5.4	5.5	5.4	5.5	55			
(13) Musculoskeletni	7.9	7.4	9.2	8.5	8.3	83			
[16] Symptoms	34	2.6	29	2.5	24	2.8			
(17) Accidents	5.3	5.5	5.1	5.7	44	5.5			
(18) Supplementary	12.8	14-1	12.7	13.8	14 3	13.5			

Discussion

The data presented here provide sufficient cause to at least reconsider accepted stereotypes of general medical practice in deprived urban areas. Wood's warning that similarities in structure may conceal important differences in the care provided seems to have been unnecessary. The similarity of practice

BRITISH MEDICAL JOURNAL VOLUME 289 28 JULY 1984

structure in inner city and outer areas seems to be mirrored by the similarity in the pattern of care provided. Patients who attend general practitioners in the inner city present much the same types of problems as those in other areas and receive similar patterns of care in terms of prescriptions, investigations, and

sypes of problems as those in other areas and receive similar patterns of care in terms of prescriptions, investigations, and referrals.

It may be argued, however, that the crude administrative boundary used by the Department of the Environment to deprivate the property of the property of the property of the deprivation are not entirely concentrated avoid the city-centre. We have therefore grouped general practitioners according to the location of their practice premises with respect to five area clusters ranging from most deprived to most affluent. As for comparing inner and outer areas, there was no systematic relation between indice of social and economic deprivation and the pattern of care provided by general practitioners. Out the more deprived areas, but neither do they show more active care in such areas, where it might be considered appropriate in view of higher levels of need.

It seems that each area of the city has general practitioners who provide a variety of patterns of care. Differences between neighbourhoods far outeveigh differences within neighbour-boat for the control of the pattern of the control of the cont

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TABLE IX—Actions taken by general practitioners by ward clusters (Percentages of age weighted samples

			Ward clusters						
Action	A	В	С	D	Е	Total	χ*	P	Cramer's
Home visits	10.4	7.4	8.8	12.8	9.8		262 55	- 0 01	0.054
Prescription	72 3	73.5	72.6	71.4	68 4	71.6	395 34	-:001	0 067
Laboratory test	3.8	3.1	5.2	111	5.0	4.0	153-51	- 0.01	0 042
X ray examination	1.3	16	2.6	1.7	1.7	iš	88 57	< 0.01	0.032
Consultant referral	5.3	5.6	71	7-0	5.8	61	75 23	- 0.01	0.029
Social services referral	0.2	0.2	0.3	0.2	0.2	0.2	12 25	< 0.01	0 012
Nursing referral	0.6	0.4	0.9	0.8	0.5	0.6	13 47	- 0.09	0.012
Return appointment fixed	36.7	41.1	34.4	38-1	40.9	38 2	262 96	< 0.01	0.054

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